We claim:

1. A welder for MIG welding comprising:

a wire speed selector to generate a control signal;

a welding wire motor that at least partially controls a wire feed speed of a wire based at least partially on said control signal;

a welding power source; and

a power supply controller that generates a power control signal that at least partially controls a welding parameter of said welding power source, said power control signal being a function of said control signal.

2. The welder as defined in claim 1, wherein said wire is a solid metal wire.

3. The welder as defined in claim 1, wherein said welding parameter includes arc voltage.

4. The welder as defined in claim 2, wherein said welding parameter includes arc voltage.

5. The welder as defined in claim 1, wherein said wire speed selector is a control knob.

6. The welder as defined in claim 4, wherein said wire speed selector is a control knob.

7. The welder as defined in claim 1, wherein the welding power source is an SCR based, phase controlled, power source.

8. The welder as defined in claim 6, wherein the welding power source is an SCR based, phase controlled, power source.

9. The welder as defined in claim 1, wherein power supply controller includes a microprocessor that includes a function generator that generates said power control signal based on said control signal.

10. The welder as defined in claim 3, wherein power supply controller includes a microprocessor that includes a function generator that generates said power control signal based on said control signal.

11. The welder as defined in claim 7, wherein power supply controller includes a microprocessor that includes a function generator that generates said power control signal based on said control signal.

12. The welder as defined in claim 8, wherein power supply controller includes a microprocessor that includes a function generator that generates said power control signal based on said control signal.

13. The welder as defined in claim 1, wherein said power control signal is proportional to said control signal.

14. The welder as defined in claim 9, wherein said power control signal is proportional to said control signal.

15. The welder as defined in claim 10, wherein said power control signal is proportional to said control signal.

16. The welder as defined in claim 11, wherein said power control signal is proportional to said control signal.

17. The welder as defined in claim 12, wherein said power control signal is proportional to said control signal.

18. The welder as defined in claim 9, wherein said power supply controller includes a function level adjuster to adjust said power control signal generated by said function generator based on a parameter selected from the group consisting of shielding gas type, consumable electrode type, and combinations thereof.

19. The welder as defined in claim 14, wherein said power supply controller includes a function level adjuster to adjust said power control signal generated by said function generator based on a parameter selected from the group consisting of shielding gas type, consumable electrode type, and combinations thereof.

20. The welder as defined in claim 17, wherein said power supply controller includes a function level adjuster to adjust said power control signal generated by said function generator based on a parameter selected from the group consisting of shielding gas type, consumable electrode type, and combinations thereof.

21. The welder as defined in claim 1, including a motor controller that controls the speed of said motor, said motor controller controlling said motor speed as a function of said control signal, said motor controller including a microprocessor, an circuit containing an amplifier, and combinations thereof.

22. The welder as defined in claim 20, including a motor controller that controls the speed of said motor, said motor controller controlling said motor speed as a function of said control signal, said motor controller including a microprocessor, an circuit containing an amplifier, and combinations thereof.

23. The method of control a power supply for a MIG welder based on a selected wire feed speed comprising:

providing a wire speed selector that generates a wire speed control signal;

providing a welding power source that generates electric energy to a work piece; and

generating a power control signal to control said energy generated by said welding power supply, said power control signal being a function of said wire speed control signal.

24. The method as defined in claim 23, including the step of generating a wire feed speed signal that is a function of said wire speed control signal.

25. The method as defined in claim 24, wherein said wire feed speed signal is generally a linear function to said wire speed control signal.

26. The method as defined in claim 25, wherein said wire feed speed signal is generated by a microprocessor.

27. The method as defined in claim 26, wherein said wire feed speed signal is generated by a microprocessor.

28. The method as defined in claim 23, wherein said power control signal and said wire speed control signal are different.

29. The method as defined in claim 26, wherein said power control signal and said wire speed control signal are different.

30. The method as defined in claim 27, wherein said power control signal and said wire speed control signal are different.

31. The method as defined in claim 23, wherein said power control signal is generally a linear function to said wire speed control signal.

32. The method as defined in claim 28, wherein said power control signal is generally a linear function to said wire speed control signal.

33. The method as defined in claim 29, wherein said power control signal is generally a linear function to said wire speed control signal.

34. The method as defined in claim 30, wherein said power control signal is generally a linear function to said wire speed control signal.

35. The method as defined in claim 23, wherein said power control signal is generated by a micro-processor.

36. The method as defined in claim 34, wherein said power control signal is generated by a micro-processor.

37. The method as defined in claim 33, wherein said power control signal is generated by a micro-processor.

38. The method as defined in claim 32, wherein said power control signal is generated by a micro-processor.

39. The method as defined in claim 31, wherein said power control signal is generated by a micro-processor.

40. The method as defined in claim 24, wherein said function used to generate said power

control signal is adjustable based on shielding gas type, consumable electrode type, and combinations thereof.

41. The method as defined in claim 31, wherein said function used to generate said power control signal is adjustable based on shielding gas type, consumable electrode type, and combinations thereof.

42. The method as defined in claim 36, wherein said function used to generate said power control signal is adjustable based on shielding gas type, consumable electrode type, and combinations thereof.

43. The method as defined in claim 37, wherein said function used to generate said power control signal is adjustable based on shielding gas type, consumable electrode type, and combinations thereof.

44. The method as defined in claim 38, wherein said function used to generate said power control signal is adjustable based on shielding gas type, consumable electrode type, and combinations thereof.

45. The method as defined in claim 23, wherein said wire is a solid metal wire.

46. The method as defined in claim 42, wherein said wire is a solid metal wire.

47. The method as defined in claim 23, wherein said wire speed selector is a control knob.

48. The method as defined in claim 46, wherein said wire speed selector is a control knob.

49. The method as defined in claim 23, wherein said power control signal is generated

by a microprocessor, a circuit containing an amplifier, and combinations thereof.

50. The method as defined in claim 24, wherein said power control signal is generated by a microprocessor, a circuit containing an amplifier, and combinations thereof.

51. The method as defined in claim 40, wherein said power control signal is generated by a microprocessor, a circuit containing an amplifier, and combinations thereof.